

# Weekly Influenza & Respiratory Illness Activity Report

A summary of influenza surveillance indicators prepared by the Division of Infectious Disease Epidemiology Prevention & Control

## Week Ending January 12, 2019 | WEEK 2

All data are preliminary and may change as more information is received

### Minnesota Influenza Geographic Spread

No Activity

Sporadic

Local

Regional

Widespread

During the week ending January 12, 2019 (Week 2), surveillance indicators showed widespread geographic spread of influenza (based on CDC's Activity Estimates Definitions).

Since the start of the influenza season, no pediatric influenza-related deaths have been reported.

[Minnesota Influenza Surveillance](http://www.health.state.mn.us/divs/idepc/diseases/flu/stats/) (<http://www.health.state.mn.us/divs/idepc/diseases/flu/stats/>)

[Weekly U.S. Influenza Surveillance Report](http://www.cdc.gov/flu/weekly/) (<http://www.cdc.gov/flu/weekly/>)

[World Health Organization \(WHO\) Surveillance](http://www.who.int/influenza/surveillance_monitoring/updates/en/) ([http://www.who.int/influenza/surveillance\\_monitoring/updates/en/](http://www.who.int/influenza/surveillance_monitoring/updates/en/))

Neighboring states' influenza information:

Iowa: [Iowa Flu Reports](http://idph.iowa.gov/influenza/reports) (<http://idph.iowa.gov/influenza/reports>)

Wisconsin: [Influenza \(Flu\)](http://www.dhs.wisconsin.gov/communicable/influenza/) (<http://www.dhs.wisconsin.gov/communicable/influenza/>)

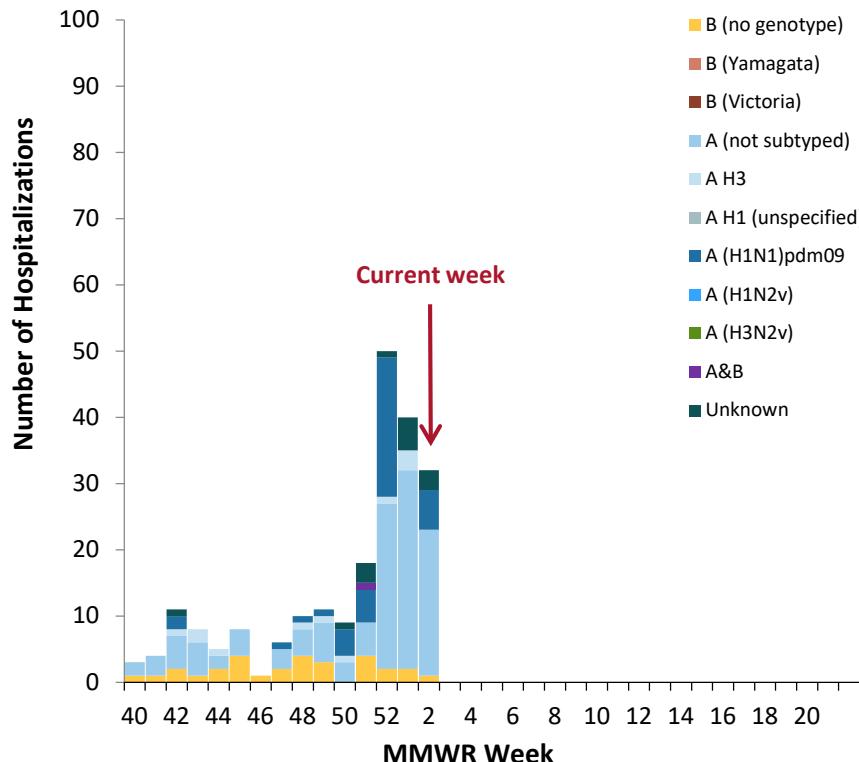
North Dakota: [Reported Seasonal Influenza Activity in North Dakota](http://www.ndflu.com/default.aspx) (<http://www.ndflu.com/default.aspx>)

South Dakota: [South Dakota Influenza Information](http://doh.sd.gov/diseases/infectious/flu/) (<http://doh.sd.gov/diseases/infectious/flu/>)

# Hospitalized Influenza Surveillance

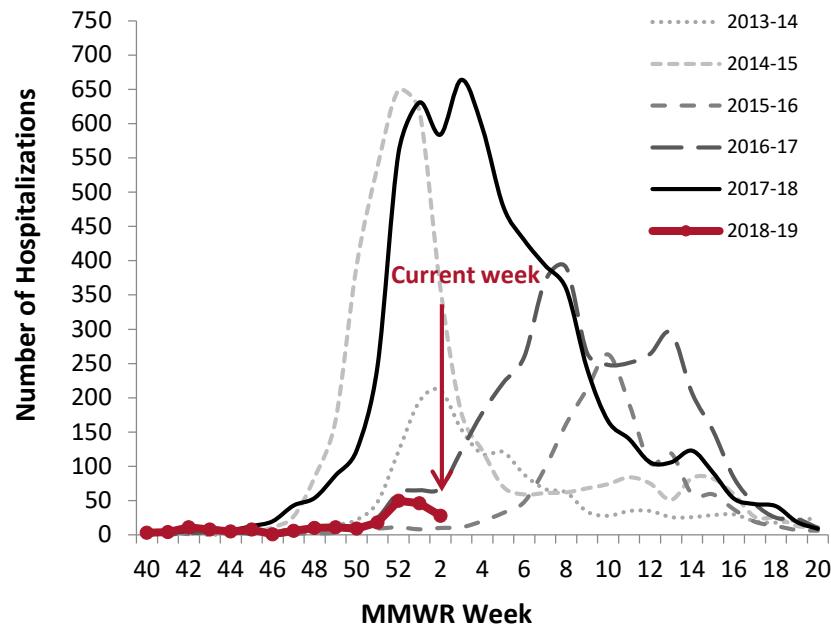
Hospitalized influenza cases are based on disease reports of laboratory-positive influenza (via DFA, IFA, viral culture, EIA, rapid test, paired serological tests or RT-PCR) and specimens from hospitalized patients with acute respiratory illness submitted to MDH-PHL by hospitals and laboratories. Due to the need to confirm reports and reporting delays, consider current week data preliminary.

## Hospitalized Influenza Cases by Type Minnesota (FluSurv-NET\*)



| Hospitalizations this week | Hospitalizations last week | Total hospitalizations (to date) |
|----------------------------|----------------------------|----------------------------------|
| 28                         | 46                         | 218                              |

## Hospitalized Influenza Cases by Season, Minnesota (FluSurv-NET\*)

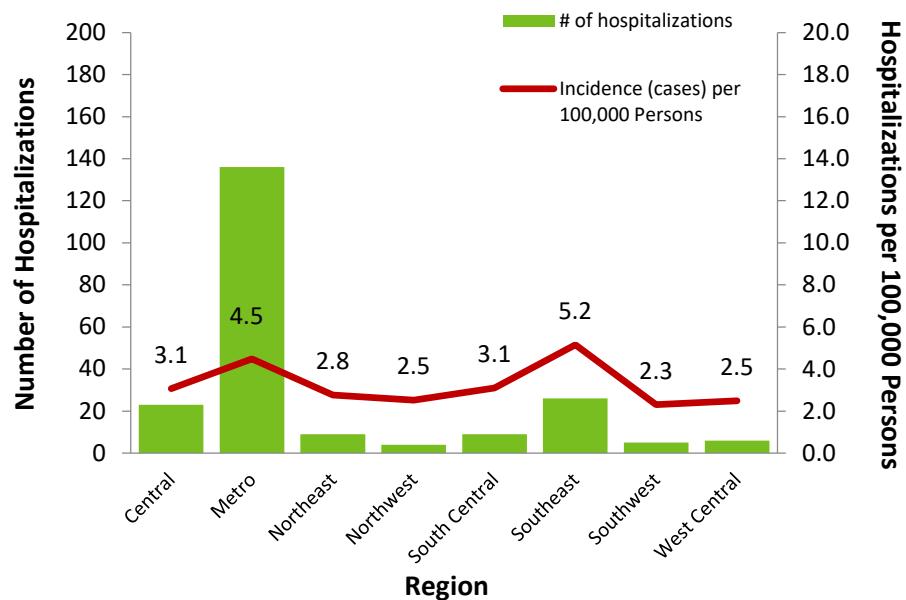


| Season    | Total hospitalizations (historic) |
|-----------|-----------------------------------|
| 2013-2014 | 1,578                             |
| 2014-2015 | 4,081                             |
| 2015-2016 | 1,538                             |
| 2016-2017 | 3,695                             |
| 2017-2018 | 6,446                             |
| 2018-2019 | 218 (to date)                     |

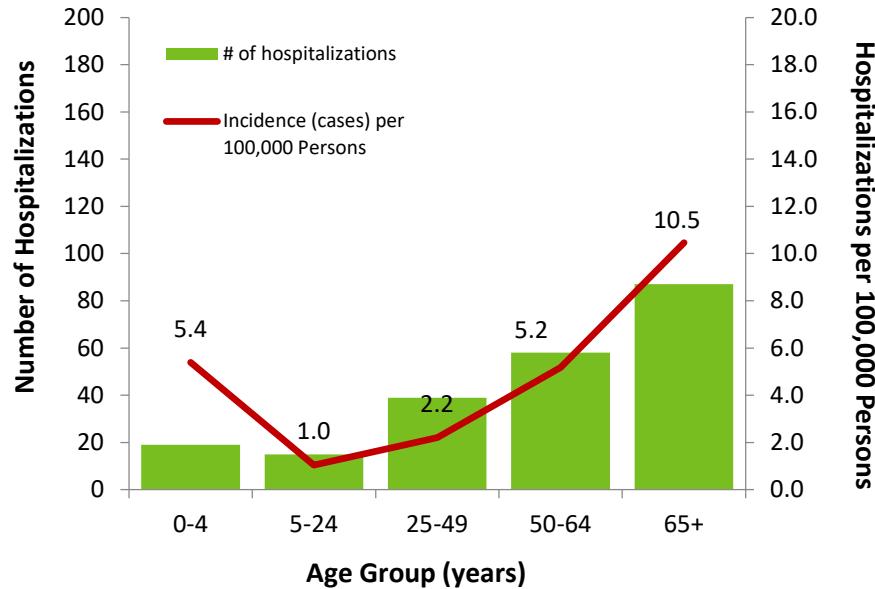
\*Influenza Surveillance Network

# Hospitalized Influenza Surveillance (continued)

## Number of Influenza Hospitalizations and Incidence by Region, Minnesota September 30, 2018 – January 12, 2019



## Number of Influenza Hospitalizations and Incidence by Age, Minnesota September 30, 2018 – January 12, 2019



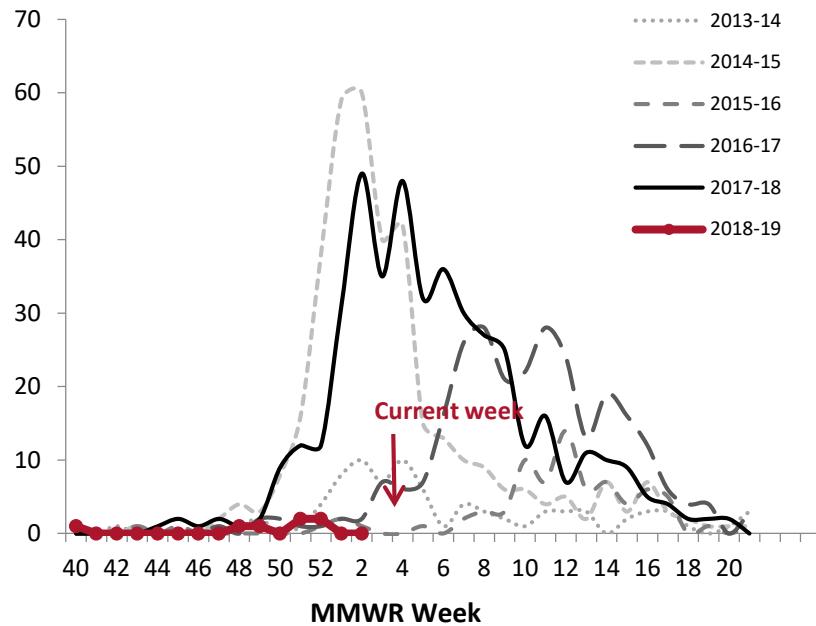
| Region        | Hospitalizations this week | Total (to date) |
|---------------|----------------------------|-----------------|
| Central       | 2 (7%)                     | 23 (11%)        |
| Metro         | 16 (57%)                   | 136 (62%)       |
| Northeast     | 1 (4%)                     | 9 (4%)          |
| Northwest     | 1 (4%)                     | 4 (2%)          |
| South Central | 3 (11%)                    | 9 (4%)          |
| Southeast     | 4 (14%)                    | 26 (12%)        |
| Southwest     | 1 (4%)                     | 5 (2%)          |
| West Central  | 0 (0%)                     | 6 (3%)          |

| Median age (years) at time of admission |
|---|
| 59.5                                    |

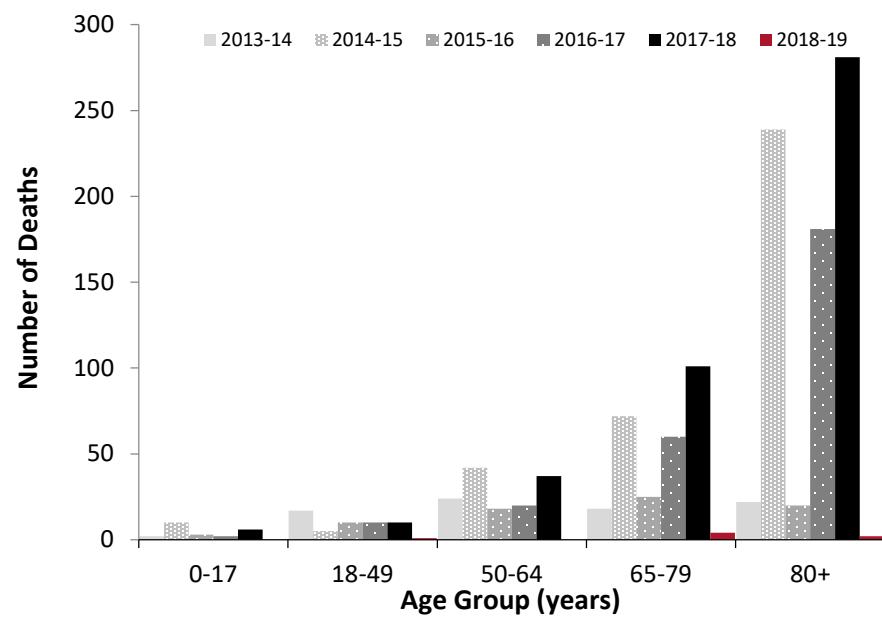
# Influenza-Associated Death Surveillance

Influenza deaths are collected via reports from Minnesota's death certificate database, hospitals, and long-term care facilities. Decedents with influenza listed as a cause of or contributor to death, have recent laboratory confirmation of influenza, or are part of an ongoing influenza outbreak at a long-term care facility are reported to influenza surveillance. Due to the need to confirm reports and reporting delays, consider current week data preliminary.

## Deaths Associated with Influenza by Season, Minnesota



## Deaths Associated with Influenza by Age Group and Season, Minnesota



| Season           | Total deaths (historic) | Total pediatric (<18 years) deaths (historic) |
|------------------|-------------------------|---|
| 2013-2014        | 83                      | 2   |
| 2014-2015        | 368                     | 10  |
| 2015-2016        | 76                      | 3   |
| 2016-2017        | 273                     | 2   |
| 2017-2018        | 435                     | 5   |
| <b>2018-2019</b> | <b>7 (to date)</b>      | <b>0 (to date)</b>                            |

| Season           | Median age (years) at time of death |
|------------------|-------------------------------------|
| 2013-2014        | 63                                  |
| 2014-2015        | 85                                  |
| 2015-2016        | 68                                  |
| 2016-2017        | 86                                  |
| 2017-2018        | 85                                  |
| <b>2018-2019</b> | <b>72 (to date)</b>                 |

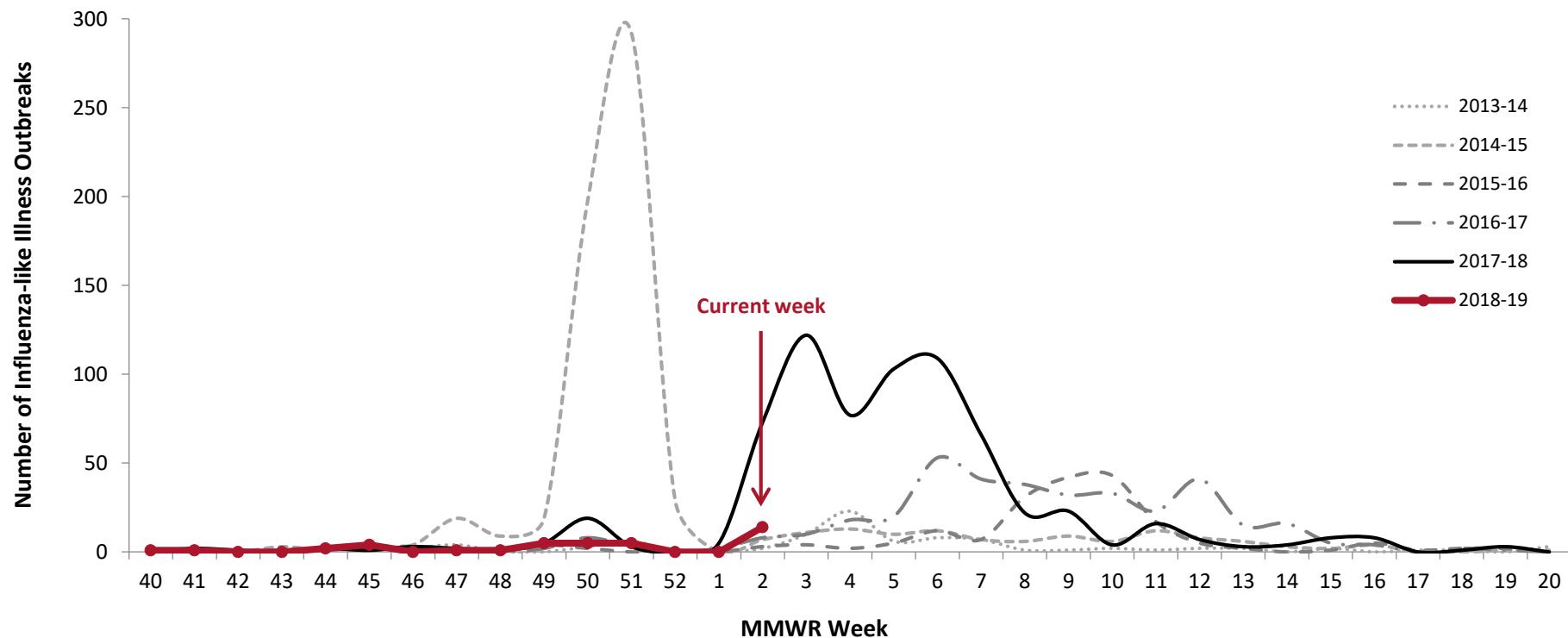
\*Influenza Surveillance Network

# Respiratory Disease Outbreak Surveillance

## School Outbreaks

K-12 schools report an outbreak of influenza-like illness (ILI) when the number of students absent with ILI reaches 5% of total enrollment or three or more students with ILI are absent from the same elementary classroom.

Influenza-like Illness (ILI) in Schools by Season



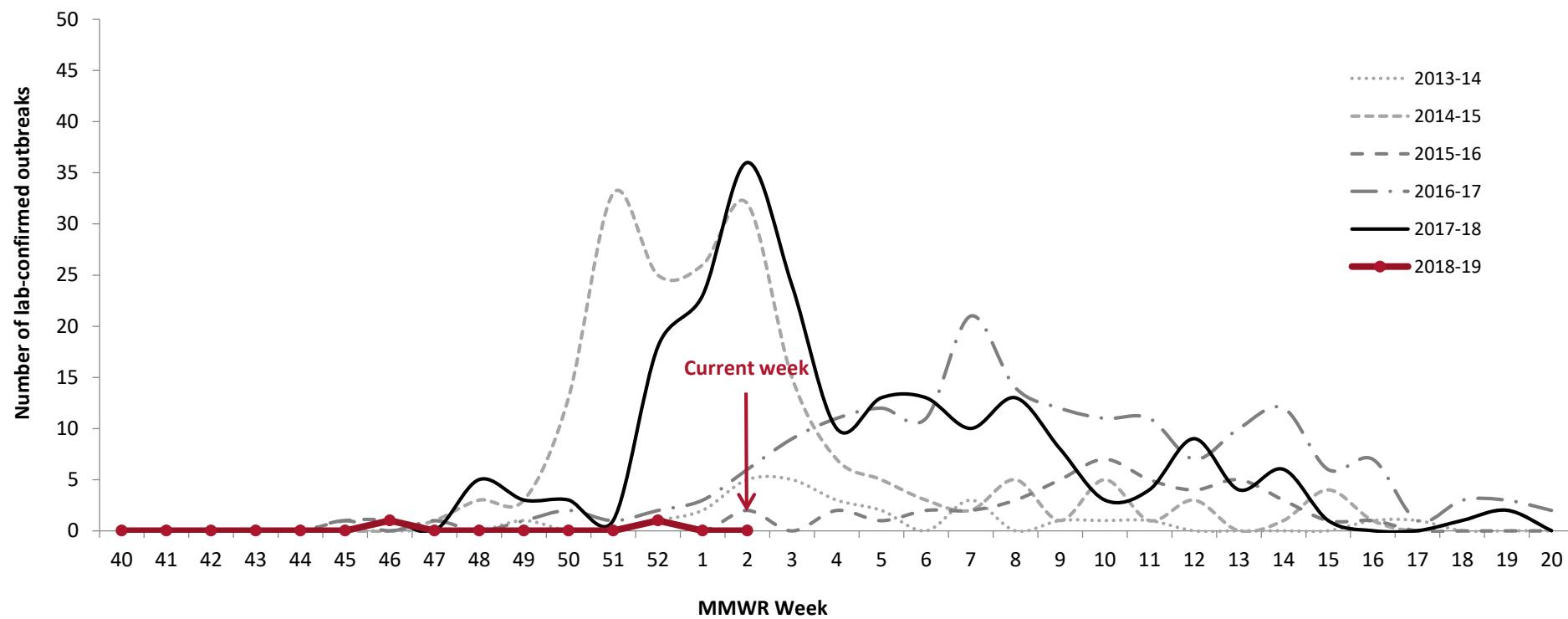
| New school outbreaks this week | New school outbreaks last week | Total this season (to date) |
|--------------------------------|--------------------------------|-----------------------------|
| 14                             | 0                              | 39                          |

# Respiratory Disease Outbreak Surveillance (continued)

## Long-Term Care (LTC) Outbreaks

LTC facilities report to MDH when they suspect an outbreak of influenza in their facility. Laboratory-confirmed outbreaks are reported here.

### Confirmed Influenza Outbreaks in LTC by Season

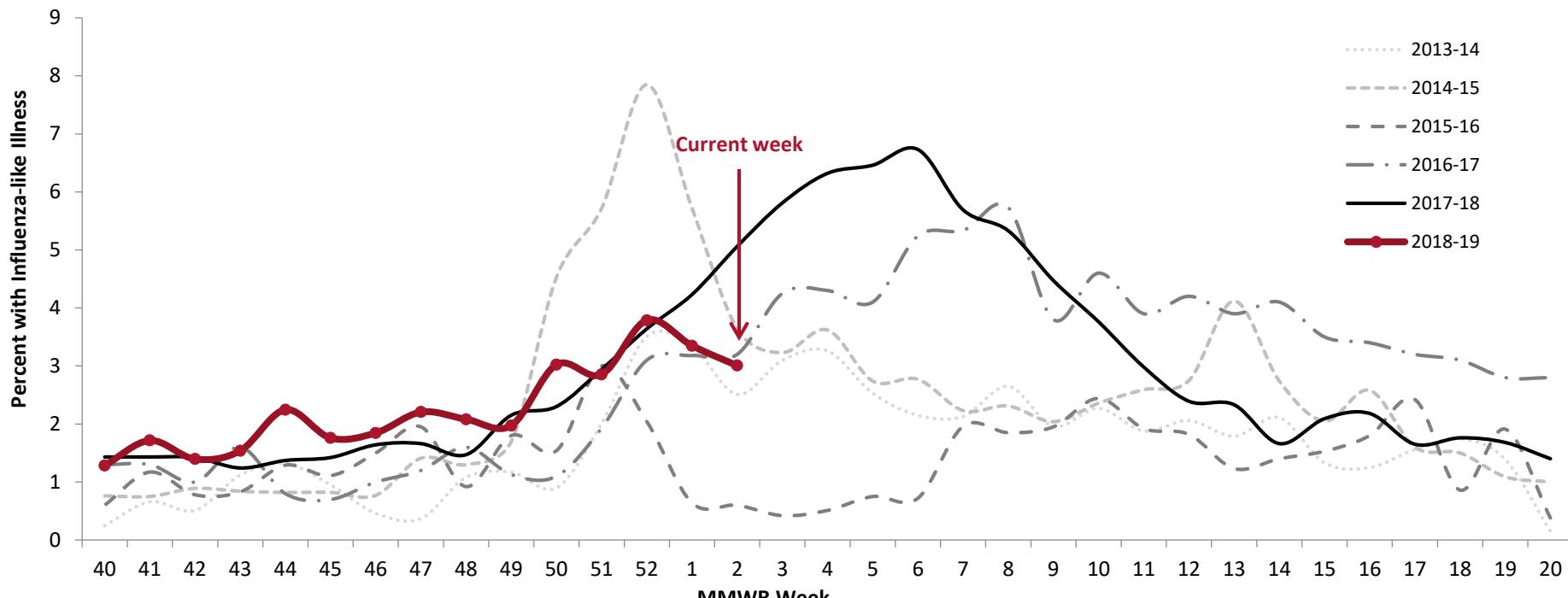


| New LTC outbreaks this week | New LTC outbreaks last week | Total this season (to date) |
|-----------------------------|-----------------------------|-----------------------------|
| 0                           | 0                           | 2                           |

# Sentinel Provider Surveillance (Outpatients)

MDH collaborates with healthcare providers who report the total number of patients seen and the total number of those patients presenting to outpatient clinics with influenza-like illness.

## Percentage of Persons Presenting to Outpatient Clinics with Influenza-Like Illness (ILI)



% of outpatients with ILI this week

3.0%

% of outpatients with ILI last week

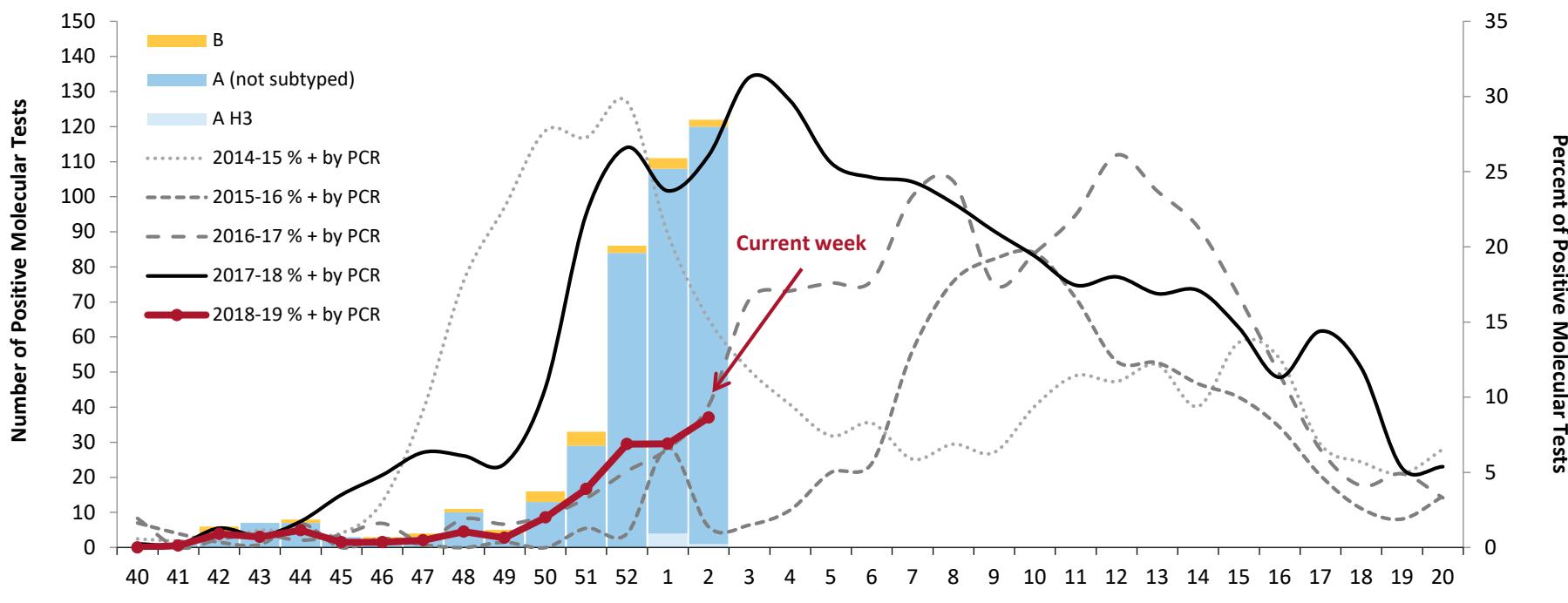
3.3%

\* Indicates current week-data may be delayed by 1 or more weeks

# Laboratory Surveillance

The MN Lab System (MLS) Laboratory Influenza Surveillance Program is made up of more than 310 clinic- and hospital-based laboratories, voluntarily submitting testing data weekly. These laboratories perform rapid testing for influenza and Respiratory Syncytial Virus (RSV). Significantly fewer labs perform PCR testing for influenza and three also perform PCR testing for other respiratory viruses. MDH-PHL provides further characterization of submitted influenza isolates to determine the hemagglutinin serotype to indicate vaccine coverage. Tracking the laboratory results assists healthcare providers with patient diagnosis of influenza-like illness and provides an indicator of the progression of the influenza season as well as prevalence of disease in the community.

## Specimens Positive for Influenza by Molecular Testing\*, by Week



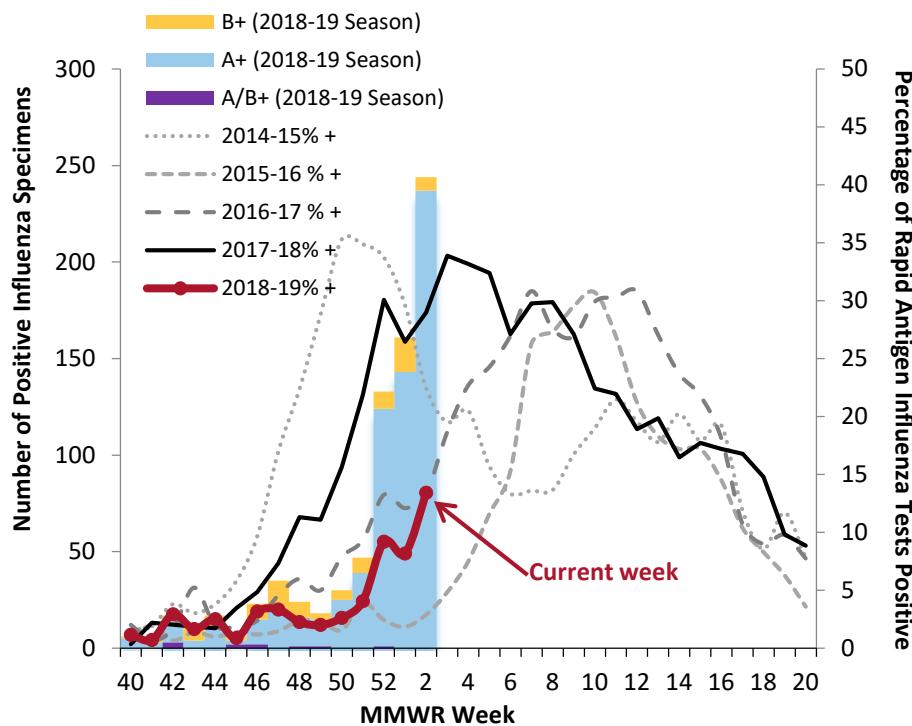
| % molecular tests positive this week | % molecular tests positive last week |
|--------------------------------------|--------------------------------------|
| 8.7%                                 | 6.9%                                 |

\* Beginning in 2016-17, laboratories report results for rapid molecular influenza tests in addition to RT-PCR results

# Laboratory Surveillance (continued)

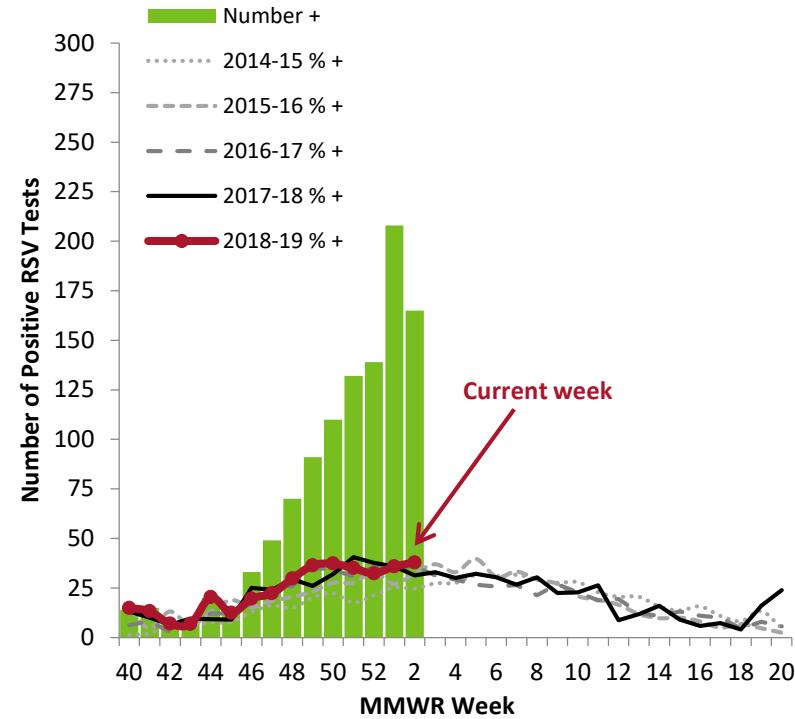
## MLS Laboratories – Influenza Testing

### Specimens Positive by Influenza Rapid Antigen Test, by Week



## MLS Laboratories – RSV Testing

### Specimens Positive by RSV Rapid Antigen Test, by Week



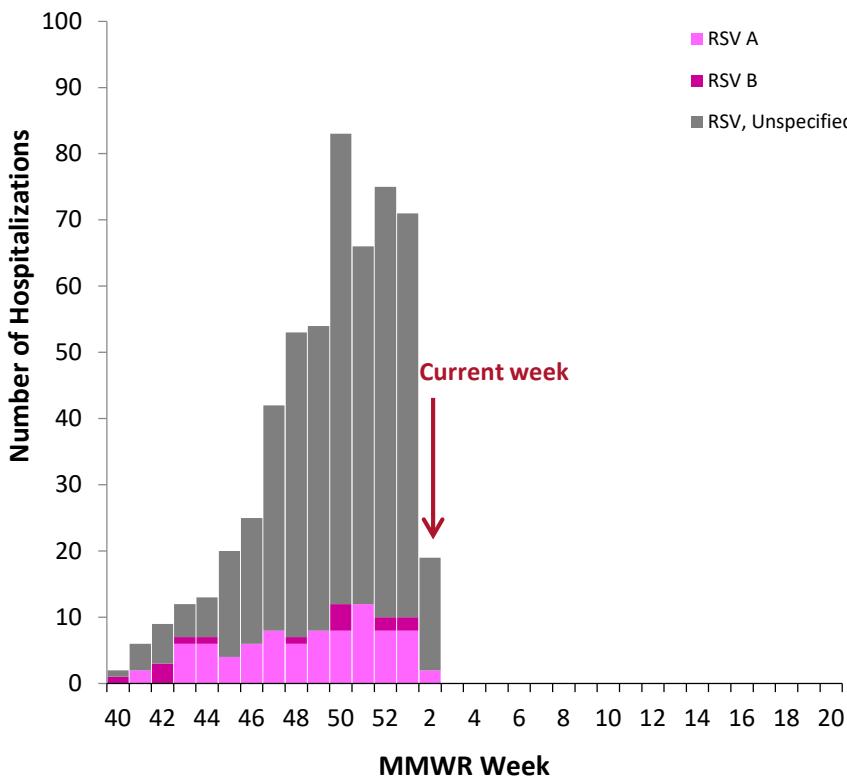
| Region          | % rapid antigen influenza tests + (current week) |
|-----------------|--|
| Northeast       | 11%  |
| South Central   | 13%  |
| Southwest       | 17%  |
| Southeast       | 24%  |
| Metro           | 12%  |
| Central         | 7%   |
| West Central    | 8%   |
| Northwest       | 39%  |
| State (overall) | 13%  |

| Region          | % rapid antigen RSV tests + (current week) |
|-----------------|--|
| Northeast       | 32%  |
| South Central   | 41%  |
| Southwest       | 32%  |
| Southeast       | 11%  |
| Metro           | 40%  |
| Central         | 46%  |
| West Central    | 25%  |
| Northwest       | 25%  |
| State (overall) | 38%  |

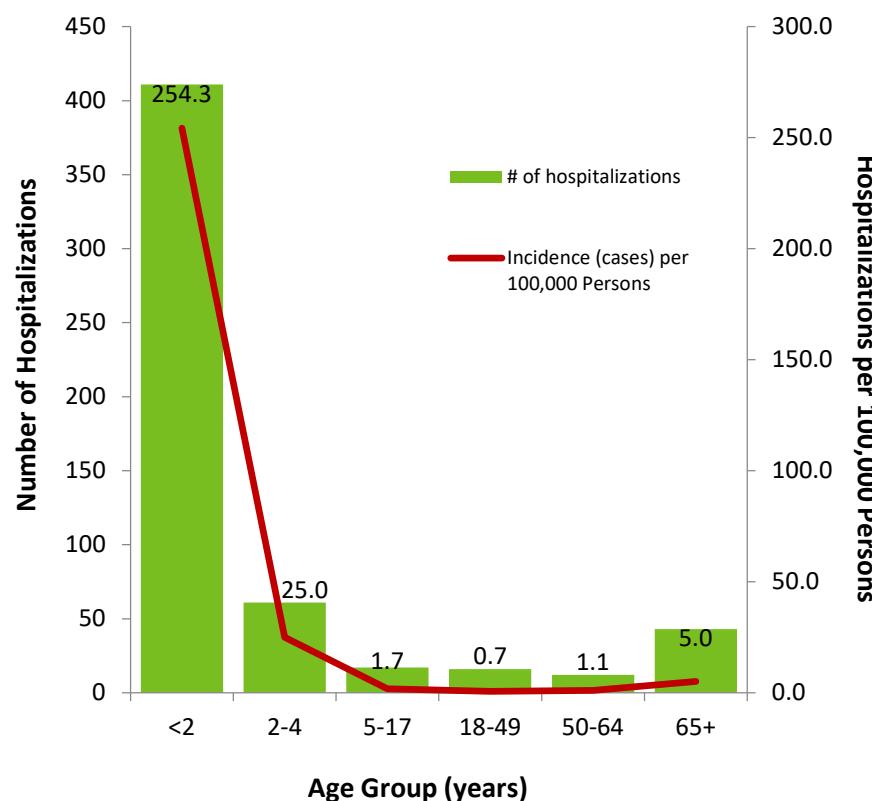
# Hospitalized RSV Surveillance

Surveillance for respiratory syncytial virus (RSV) began in September 2016. Hospitalized inpatients of all ages who reside in the 7-county Twin Cities metropolitan area (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington) with laboratory-confirmed RSV are reportable. Due to the need to confirm reports and reporting delays, consider current week data preliminary.

**Hospitalized RSV Cases by Subtype,  
Minnesota**



**Number of RSV Hospitalizations and Incidence by Age,  
Minnesota**



| Hospitalizations this week | Hospitalizations last week | Total hospitalizations |
|----------------------------|----------------------------|------------------------|
| 19                         | 71                         | 560                    |

Median age at time of admission

9 months

# Weekly U.S. Influenza Surveillance Report

2018-2019 Influenza Season Week 1 ending January 5, 2019

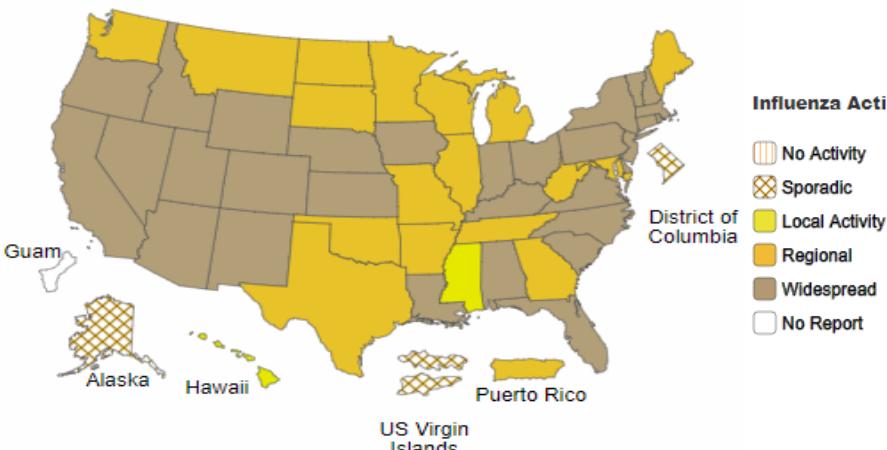
## CDC National Influenza Surveillance (<http://www.cdc.gov/flu/weekly/>)

Influenza activity remains elevated in the United States.

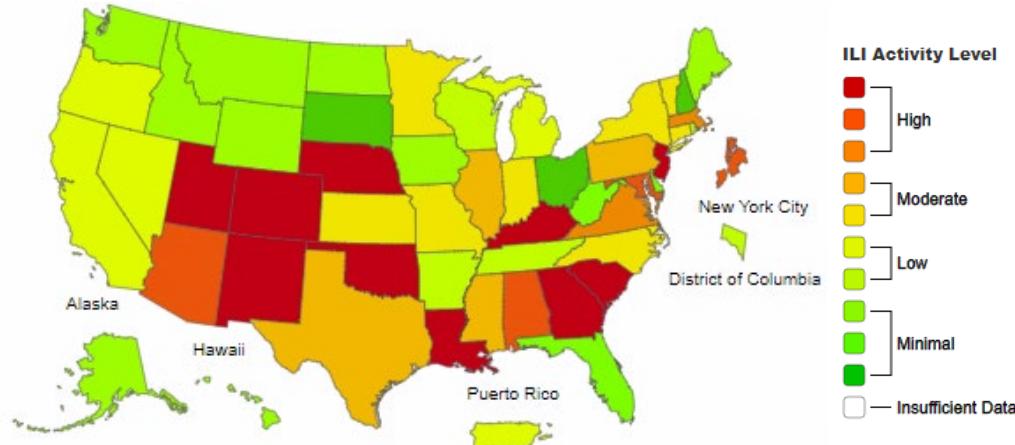
Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate.

- Viral Surveillance: The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased slightly. Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses have predominated in the southeastern United States (HHS Region 4).
- Influenza-like Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) decreased from 4.0% to 3.5%, but remains above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- Geographic Spread of Influenza: The geographic spread of influenza in 30 states was reported as widespread; Puerto Rico and 17 states reported regional activity; two states reported local activity; the District of Columbia, the U.S. Virgin Islands and one state reported sporadic activity; and Guam did not report.
- Influenza-associated Hospitalizations: A cumulative rate of 9.1 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (22.9 hospitalizations per 100,000 population).
- Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- Influenza-associated Pediatric Deaths: Three influenza-associated pediatric deaths were reported to CDC during week 1.

A Weekly Influenza Surveillance Report Prepared by the Influenza Division  
Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists\*



A Weekly Influenza Surveillance Report Prepared by the Influenza Division  
Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet



\*This map indicates geographic spread and does not measure the severity of influenza activity.